



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,625	11/06/2001	Michael A. Barrese	BARRESE 1-1-1-2	5807
7590 01/10/2006			EXAMINER	
Stephen J. Weed Synnestvedt & Lechner LLP 2600 ARAMARK Tower 1101 Market Street Philadelphia, PA 19107-2950			JAMAL, ALEXANDER	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,625

Applicant(s)

BARRESE ET AL.

Examiner

Alexander Jamal

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Based on the submitted arguments (11-10-2005), examiner maintains the current set of rejections and responds to the arguments below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **1, 5-6,8-13** rejected under 35 U.S.C. 103(a) as being unpatentable over Weston et al. (5799069), and further in view of Johnson (4008427).

As per **claim 1**, Weston discloses a power supply comprising telephone line interface (contained within blocks 56,62,64 of Fig. 3)), a power supply converter 64. However, Newton does not specify a gyrator or an inductor in the circuit, or a PWM (comprising an oscillator and inductor).

Johnson discloses a description of a pulse power supply that produces a regulated output for a large range of input voltages (Col 1 lines 1-35). Johnson's circuit (Fig. 1)

comprises inductor 40 coupled to pulse circuit 32 (driven by oscillator 10), and outputting to converter 20. It would have been obvious to one of ordinary skill in the art at the time of this application to implement Johnson's PWM switching circuit as the power converter for the advantage that it can operate over a wide range of input voltages (such as the wide range of voltages seen on telephone lines).

Weston's telephone line interface isolates and extracts both an information and power signal (Fig. 3, blocks 56,64). Examiner takes official notice that it is well known in the art to use gyrators in subscriber terminals for the purpose of isolating and extracting data and power signals. This is discussed in applicant's specification page 5 lines 16-22.

As per **claim 5**, Weston's telephone line interface isolates and extracts both an information and power signal (Fig. 3, blocks 56,64). Examiner takes official notice that it is well known in the art to use polarity guards when interfacing with the phone line for the advantage of protecting against tip/ring reversal (unknown polarity) from the telephone line. This is disclosed as prior art in applicant's specification page 5 lines 10-15.

As per **claim 6**, Johnson discloses a startup circuit comprising blocks 30,34 and switch 36 (Fig. 1).

As per **claim 8**, Johnson discloses switches 14 and 16 (Fig. 1) located between the inductor and after the gyrator (the gyrator would be located at filter 30 when combined with the invention of Weston).

Art Unit: 2643

As per **claims 9,10**, Weston in view of Johnson discloses a divider 12 coupled to the oscillator 10 (JOHNSON: Fig. 1), a transformer 20 with a center tap coupled to inductor 40, a dual switches (with clamping circuits) 14 and 16, and a rectifier circuit coupled to the primary winding of the transformer (JOHNSON: Col 3 lines 3-22)

As per **claims 11,12**, the electrical device is a modem (Weston) with a rechargeable battery (Johnson, Fig. 1, capacitors 22 and 24).

As per **claim 13**, Johnson discloses that the oscillator frequency used to drive the pulse supply to pulse the inductor with current operates at 15KHz and 30KHz (approximately 500KHz).

4. **Claim 7** rejected under 35 U.S.C. 103(a) as being unpatentable over Weston et al. (5799069) and Johnson (4008427) as applied to claim 1, and further in view of Wakamatsu (5995381).

As per **claims 7**, Weston and Johnson disclose applicant's claim 1, but do not disclose an output shunt regulator on the PWM circuit.

Wakamatsu teaches that in PWM circuits, an output shunt regulator may be used to stabilize the output voltage with high precision (Col 8 lines 5-15). It would have been obvious to one of ordinary skill in the art at the time of this application to implement an output shunt regulator for the advantage of being able to stabilize the output voltage with high precision.

Art Unit: 2643

5. **Claims 18-22,2-4** rejected under 35 U.S.C. 103(a) as being unpatentable over Weston et al. (5799069) and Johnson (4008427), and further in view of Lui (6624635).

As per **claims 18,19,2,3**, Weston and Johnson disclose applicant's claim 1, but do not disclose a combiner coupled to a host supply in order to supplement the line power with the host power whenever the voltage level falls below a predetermined level.

Lui discloses a power supply for a subscriber terminal that comprises a combiner to supplement the line power if the line power falls to a certain level (Col 3 lines 35-64). He further discloses that the combiner may comprise a diode. It would have been obvious to one of ordinary skill in the art at the time of this application to implement a combiner to make use of a host power source (battery) for the advantage of increasing the reliability of the system.

As per **claims 21,22**, claims rejected for the same reasons as the rejection of claim 18. The device of the rejection would perform the method of claims 21, 22.

As per **claims 4,20**, Liu discloses the use of a diode but does not specify that it is a Schottky diode. It would have been obvious to one of ordinary skill in the art at the time of this application to make a design choice regarding the type of diode used. Since Liu's device is used to provide DC voltage levels for Modem circuitry the voltage levels would be small, as such, when using a diode to combine the supplemental battery power, it would be obvious to choose one with a low voltage drop so that the supply voltage levels do not drop to unusable levels before the diode is forward biased.

Response to Arguments

6. Applicant's arguments with respect to all claims have been considered but are they are not persuasive.

As per applicants argument that the Weston, and Liu references do not disclose regulating and supplementing power in a host device (remarks page 8), examiner disagrees. Weston Fig. 3 discloses the function of regulation of power from the phone line (WESTON: Fig. 3 block 64). Liu teaches the addition of a supplementing circuit to a terminal device (LIU: Fig. 3 blocks 62,24).

As per applicants argument that the Weston reference is only concerned with measuring available voltage levels (remarks page 8), examiner disagrees. As mentioned above Weston discloses the function of regulating the supplied power (Fig. 3 block 64). Examiner notes that Weston does not disclose the circuit component level details of the regulating and telephone line interface circuits and as such, examiner contends that someone implementing the system of Weston would rely on knowledge available to one skilled in the art or found in prior art references (such as Johnson) to implement the functional blocks disclosed in Weston Fig. 3.

As per applicant's arguments that Weston teaches away from regulating or supplementing the power (remarks pages 8-9) examiner disagrees. Weston does disclose regulating the power as mentioned above. Furthermore, the fact that Weston varies the modem data rate according to available power does not teach away from the clear advantage provided by the teachings of Liu. With the supplemented power taught by Liu,

the terminal will have increased reliability by allowing the terminal to operate at higher data rates in the event of power fluctuations on the telephone line.

As per applicant's argument that there is no motivation to combine Johnson's and Wakamatsu's teachings with Weston's circuit (remarks pages 9,10), examiner disagrees. Examiner notes that Weston does not disclose the circuit component level details of the regulating and telephone line interface circuits and as such, examiner contends that someone implementing the system of Weston would rely on the well known knowledge available to one skilled in the art or found in prior art references (such as Johnson or Wakamatsu) to implement the functional blocks disclosed in Weston Fig. 3. As per applicant's comment that Weston does not teach regulating to constant output levels, examiner again notes Weston Fig. 3 block 64 and constant voltage Vcc.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

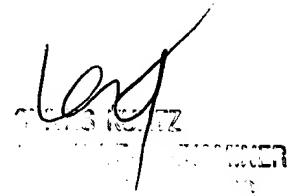
Art Unit: 2643

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization where this application or proceeding is assigned are **571-273-8300** for regular communications and **571-273-8300** for After Final communications.

AJ
January 4, 2006



A handwritten signature, likely of Curtis A. Kuntz, is written over a rectangular stamp. The stamp contains the text "CURTIS KUNTZ" and "SUPERVISOR" in a bold, sans-serif font. The signature is written in black ink and is somewhat stylized.